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| **PETITION NO. 755A –** Iroquois Gas Transmission System, L.P. application submitted to the Federal Energy Regulatory Commission to modify the existing interstate natural gas pipeline by the addition of a compressor station off of High Meadow Road in Brookfield, Connecticut. | } | Connecticut |
| | } | Siting |
| | } | Council |
| | } | June 27, 2006 |

**Opinion and Recommendations**

## Introduction

On February 7, 2006, Iroquois Gas Transmission System, L.P. (Iroquois) petitioned the Connecticut Siting Council (Council) for a declaratory ruling that the Council does not have jurisdiction over proposed additions to Iroquois' previously authorized natural gas compressor station off High Meadow Road in Brookfield, Connecticut.

At a public meeting held on February 22, 2006, the Council ruled that the Federal Energy Regulatory Commission (FERC) has exclusive jurisdiction over the proposed Brookfield compressor station under the Natural Gas Act, 15 U.S.C. § 717 *et. seq.* The Council further stated its intention to develop a record in this matter, develop findings of fact based on this record and make recommendations to the FERC and Algonquin regarding siting, environmental mitigation measures and construction procedures. Additionally, the Council does not have jurisdiction over the safety standards of the proposed projects, which is regulated by the United States Department of Transportation (U.S. DOT).

In December of 2001 and March of 2002, Iroquois petitioned the Council that a Certificate of Environmental Compatibility and Public Need (Certificate) is not required for the addition of a compressor station (Petition 540) and modification to the existing pipeline (Petition 555) in Brookfield, Connecticut. The Council rendered a decision on September 25, 2002, ruling that no Certificate is required for the proposed compressor station and pipeline modifications. (Refer to the Findings of Fact nos. 3 through 5).

On October 31, 2002, the FERC approved Iroquois' application to construct a compressor station, subject to conditions. However, the two electric generation customers in New York that would have been serviced by the project subsequently deferred or cancelled their electric generation projects and as a result Iroquois delayed construction of the approved facilities. Since that time Consolidated Edison Company of New York, Inc. (Con Edison) has identified a need for similar facilities for new firm transportation service. Iroquois has developed a project to serve Con Ed's need; it is called the MarketAccess Project.

On March 29, 2006, Iroquois filed an application with the FERC for an amendment to the certificate of public convenience and necessity that was issued by the FERC on October 31, 2002. Iroquois proposed to reduce the size of the previously approved compressor station from 10,000 (nominal) horsepower to 7,700 (nominal) horsepower to allow Iroquois to receive natural gas from the Algonquin system; and to install gas coolers.

## Project Description

The proposed compressor station would be constructed on two parcels that total 68.3 acres, located to the west of High Meadow Road in Brookfield, Connecticut. The High Meadow Road site was selected for the proposed project because of the proximity between the existing interconnection between Algonquin and Iroquois, minimizing the need for construction of new pipeline. The Council will recommend that Iroquois not subdivide the proposed property or develop the property for energy, industrial or commercial use without the Council's review and approval.

The proposed facilities include a turbo-compressor unit; control/utility buildings; a storage building; a local control building; a cooler motor control center (MCC) building; gas coolers, an emergency generator, a domestic gas building and associated paved parking and access areas. The proposed compressor building would include an approximately 50-foot tall exhaust stack. Access to the site would be via a driveway approximately 500 feet long.

The proposed site is within a residential area. The nearest residence to the proposed site, located at 67 High Meadow Road, is approximately 90 feet from Iroquois property line. There are three residences located within approximately 600 feet, and approximately 196 residences within one-half mile of the proposed compressor building. Since 2002, approximately 30 houses have been built within one-half mile of the proposed compressor building.

At its closest point, the proposed compressor building emission stack would be located approximately 2,040 feet from the Whisconier Middle School property line and approximately 2,325 feet from the closest corner of the school building. At its closest point, the proposed station yard fence would be approximately 1,800 feet from the school property line.

Iroquois would design the high pressure piping for a maximum allowable operating pressure (MAOP) of 1,480 pounds per square inch (psi). The station discharge pressure would not exceed the MAOP of 1,440 psi. The Council will recommend that Iroquois notify the Council and the Town of Brookfield in the event that it applies to the FERC to increase the maximum operating pressure of the pipeline above 1,440 psi.

## Alternative Sites

Iroquois investigated potential alternative sites for the proposed compressor station project. The investigation consisted of a desktop analysis of five alternative sites without any field work. Alternative Sites 1 through 4 were rejected by Iroquois due to insufficient developable land and potential environmental impacts.

The Vale Road Alternative site (Alternative Site 5) is a parcel within Brookfield that is approximately one mile upstream of the proposed site. This site is in an industrial zone, and was used as a sand and gravel operation from 1950 to the early 1980s.

Construction of the Vale Road Alternative site would include the installation of an additional 1.25 miles of pipeline lateral that would extend to the Algonquin pipeline and the Algonquin metering and regulation facilities, which are currently proposed at the existing High Meadow Road site. The additional pipeline would result in approximately 3.8 acres of new land disturbance and potentially impact approximately 4.5 acres of wetlands.

While no school is in proximity to the Vale Road Alternative site, there are 11 residences within approximately 600 feet of the Vale Road Alternative site. Approximately 166 residences and 48 businesses are within one-half mile.

The Council believes that, in comparison to the Vale Road Alternative site, the proposed site is the most feasible location for the construction of the proposed project. Construction of the proposed site would result in less environmental impact than the Vale Road Alternative site; and there are fewer residences in close proximity.

## Environmental Considerations

Visibility of the proposed compressor station would be minimized through screening from existing wooded buffers and the elevation of the proposed site, which is lower than High Meadow Road. Iroquois intends to further minimize the visual impact of the site through landscaping and the use of non-intrusive exterior lighting. The Council will recommend that Iroquois implement a plan for landscaping, lighting, and architecture of the buildings, including a color scheme decided in consultation with the Town of Brookfield.

To protect air quality, Iroquois would use best available control technology (BACT), including lean pre-mix dry combustors to control nitrogen oxide emissions. Carbon monoxide emissions would be controlled through normal engine maintenance and tuning. Construction-related air impacts would be minimized through the use of dust suppression techniques. The Council will recommend that Iroquois evaluate the possibility of selective catalytic reduction (SCR) and oxidation catalysts to further reduce emissions, and submit the results of the evaluation for review by the CTDEP.

The previous industrial use of the proposed site has resulted in soil and groundwater contamination. Groundwater in the area of the proposed site is classified as GA, which identifies water suitable for drinking without treatment. The Council will recommend that soil, groundwater, and asbestos contamination be remediated in accordance with applicable federal and state requirements.

There are no known federally listed endangered or threatened species at the proposed site. There are no known state listed Endangered, Threatened, or Special Concern Species at the proposed site. The Council does not believe that the proposed project would have an adverse impact on threatened or endangered species.

The noise level from the proposed compressor station is expected to be in compliance with the FERC, State of Connecticut, and Town of Brookfield noise standards. The Council will recommend that Iroquois incorporate engineered noise control into both the conceptual and detailed design of the compressor station; conduct post-construction noise surveys and provide the results of such surveys to the Council; and Iroquois should implement noise controls as soon as practical if the operation of the compressor station exceeds applicable noise standards.

Silencers could be installed on the exhaust stack to minimize the noise from an unsilenced blowdown. The Council will recommend that Iroquois perform an engineering evaluation of unsilenced versus silenced blowdown time, and report its findings. During plant startup and commissioning, Iroquois should provide temporary silencers for atmospheric venting.

## Safety Considerations

The Council will recommend that Iroquois evaluate the installation of a 'dissipation array' proactive lightning protection system as an additional means of facility lightning protection beyond the requirements contained within Lightning Protection Code.

The proposed compressor station would be in compliance with safety standards mandated by the U.S. DOT, Title 49 of the Code of Federal Regulations (CFR), Part 192; Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards. Safety and emergency systems would be monitored 24 hours a day by Iroquois' gas control center in Shelton, Connecticut using an on-site Supervisory Control and Data Acquisition (SCADA) system. The Gas Control Center would have the ability to initiate an emergency shutdown (ESD) through SCADA, if necessary.

In the event that an emergency were to occur on the Iroquois pipeline within the Town of Brookfield, Iroquois could have an alarm immediately transmitted over the telephone line to the Brookfield first responders. The Council will recommend that the Iroquois control center notify the Brookfield designated emergency responder personnel immediately when an emergency shutdown situation is detected; and that Iroquois consult with the Town regarding what the circumstances in which they would require emergency notification.

The Council will recommend that Iroquois evaluate the technical feasibility of an automatic closing of the mainline valves, within a predetermined amount of time, after the ESD system has been initiated due to a fire or excess natural gas being detected within the compressor building or at the exterior site piping; however, the system could be designed to allow operator intervention to abort the automatic sequence. Iroquois should coordinate this study with Algonquin because its mainline shut-off valves will also be required to close to prevent gas from continuing to flow into the compressor station area. Iroquois should report the results of this evaluation to the Council for consideration and possible future implementation.

Since the compressor station will be unmanned, the Council will recommend that Iroquois incorporate supplemental exterior monitoring of site safety parameters relating to gas release, fire and intrusion. Equipment used for monitoring may include such devices as video cameras, microphones, exterior natural gas detectors, and thermal sensors for fire detection.

The U.S. DOT uses 5,000 Btu threshold heat flux, which is the point of combustion of wood, to determine the potential impact radius (PIR), or worst-case hazard radius. At 5,000 Btu the calculated PIR for the proposed station is 624 feet. However, a burn injury would occur at a threshold of 1,800 Btu threshold heat flux, which would result in a calculated PIR of 1,040 feet. The Council will recommend that Iroquois incorporate the calculated PIR information in its Emergency Operating Procedures and in its training manual for emergency responders.

The Council believes that the PIR calculation, at either threshold heat flux, would not impinge on Whisconier Middle School property line, which is located approximately 2,000 feet to the north of the proposed compressor building stack centerline. The Council will recommend that Iroquois investigate, with the Town of Brookfield, the possibility of building a physical barrier such as an earthen berm, a fence, or other safeguards near the proposed site, to increase the protection of the school near the site; and the possibility of developing evacuation plans for the school.

## Recommendations

The Council does not have jurisdiction to rule whether or not there is a need for the proposed facility. The project is under the exclusive jurisdiction of the FERC. The FERC encourages the applicants to cooperate with agencies such as the Council regarding the siting of pipeline facilities, environmental mitigation, and construction procedures. The FERC alone will decide whether there is a need for the proposed projects and whether this project or another one can best provide the necessary service.

Based on the record in this proceeding, the Council believes that, in comparison to the Vale Road Alternative site, the proposed site is the most feasible location for the construction of the proposed project. Construction at the proposed site would result in less environmental impact than the Vale Road Alternative site; and there are fewer residences in close proximity to the proposed site. Although the proposed site is located approximately 2,000 feet from the Whisconier Middle School, the school would be outside of the PIR and therefore it's safety would not be impacted by the station.

If the project is approved by the FERC, the Council offers the following recommendations for construction and operation of the proposed facility:

1. Iroquois should implement a plan for landscaping, lighting, and architecture of the buildings, including a color scheme decided in consultation with the Town of Brookfield.

2. Iroquois should evaluate the possibility of selective catalytic reduction (SCR) and oxidation catalysts to further reduce emissions, and submit the evaluation for review by the CTDEP.

3. Iroquois should remediate soil contamination at the site to the residential direct exposure and the GA pollutant mobility standards under the Connecticut Remediation Standards Regulations (RSRs).

4. Iroquois should perform ongoing remediation of groundwater contamination to achieve the levels required for GA areas under the Connecticut RSRs.

5. Iroquois should identify, sample, and, if necessary, isolate and remove asbestos containing materials from the site, in accordance with applicable federal and state requirements.

6. Iroquois should incorporate engineered noise control into both the conceptual and detailed design of the compressor station.

7. Iroquois should conduct post-construction noise surveys and provide the results of such surveys to the Council.

8. Iroquois should implement noise controls as soon as practical if the operation of the compressor station exceeds applicable noise standards.

9. Iroquois should perform an engineering evaluation of unsilenced versus silenced blowdown time, and report its findings.

10. During plant startup and commissioning, Iroquois should provide temporary silencers for atmospheric venting.

11. Iroquois should evaluate the installation of a 'dissipation array' proactive lightning protection system as an additional means of facility lightning protection beyond the requirements contained within Lightning Protection Code.

12. Iroquois should not subdivide the property at High Meadow Road or develop the property for energy, industrial or commercial use without the Council's review and approval.

13. Iroquois should notify the Council and the Town of Brookfield in the event that it applies to the FERC to increase the maximum operating pressure of the pipeline above 1,440 psi.

14. The Iroquois control center should notify the Brookfield designated emergency first responder personnel immediately when an emergency shutdown situation is detected.

15. Iroquois should consult with the Town of Brookfield to determine what SCADA system parameters, and type of emergency information that should be reported to the town.

16. Iroquois should prepare an Emergency Plan, in consultation with the Town of Brookfield, specific for the compressor station facility. Emergency response procedures should be a key component of the plan.

17. Iroquois should evaluate the technical feasibility of an automatic closing of the mainline valves, within a predetermined amount of time, after the ESD system has been initiated due to a fire or excess natural gas being detected within the compressor building or at the exterior site piping, however, the site could be designed to allow operator intervention to abort the automatic sequence. Iroquois should coordinate this study with Algonquin, because Algonquin's mainline shut-off valves will also be required to close to prevent gas from continuing to flow into the compressor station area. Iroquois should report the results of this evaluation to the Council for consideration and possible future implementation.

18. Iroquois should incorporate supplemental exterior monitoring of site safety parameters relating to gas release, fire and intrusion.

19. Iroquois should incorporate the calculated PIR information in its Emergency Operating Procedures and in its training manual for emergency first responders.

20. Iroquois should investigate, with the Town of Brookfield, the possibility of building a physical barrier such as an earthen berm, a fence, or other safeguards near the proposed site, to further increase the protection of the school near the site; and the possibility of developing evacuation plans for the school.